notably carbonaceous

abundant biotite and little chlorite

indicated by c

dome uncertain, but lowermost amphibolite west of the dome is in same

structural position as amphibolite mapped as Oma east of dome and the

pinstriped, muscovite-chlorite-biotite-plagioclase quartzite and quartz-

plagioclase granofels (OmI); distinctive, more quartzofeldspathic layers

are separated by 1- to 0.5-mm-thick layers richer in muscovite, biotite,

and chlorite which parallel a strongly developed transposition schistosity.

Locally contains beds of vitreous quartzite (Omq) from 1 to 3 cm thick to

Feldspathic granofels and schist-Medium-dark-gray, well-layered biotite-

quartz-plagioclase granofels containing abundant, thin, 1- to 2-cm-thick

layers of hornblende-plagioclase-quartz granofels and garnet-chlorite-

Oml Laminated feldspathic quartzite—Light-gray- to whitish-gray-weathering,

less common, well-bedded layers as much as 1 m thick

two may be correlative

laterally into yellowish-gray-weathering, garnetiferous quartzite too thin

to map or into feldspathic schist and granofels (Ochfs). Contact with

Amphibolite member—Dark-green to black, coarse- to medium-grained

hornblende-plagioclase amphibolite. Coarser grained varieties have

chunky hornblende crystals 1 to 2 cm in length and distinctive white,

rectangular to ellipsoidal patches of plagioclase 0.2 to 0.7 cm in length

that are possibly relict phenocrysts. Finer grained varieties are

imperfectly layered and contain thin layers of very dark gray biotite-

plagioclase-quartz granofels. Unit interpreted as collection of basaltic

chloritic, ankerite-pitted hornblende-plagioclase amphibolite. Locally

Ankeritic greenstone member-Medium-dark-green to pale-green,

underlying amphibolite (Ocha) is sharp

lava flows or thick sills

ironstone, and pinkish layers of coticule 1 to 2 cm thick

volcaniclastic rock

(Ochg) at or near their mutual contact

Greenstone member-Medium-green to gray-green, highly foliated,

hornblende-plagioclase greenstone (Ochg) marked by distinctive, irregular

clots or indistinct patches of more plagioclase-rich inclusions as much as

3 cm in length set in a more uniform amphibolite matrix giving rock a

fragmental appearance. Passes into zones of highly ankeritic greenstone

(Ochag); one prominent zone near base, mapped as Ochag, contains lens

of buff-gray- to orangish-gray-weathering dolostone, quartzite, and

coticule. Greenstone interpreted as basaltic to andesitic tuff breccia and

Quartzite and coticule member—Discontinuous beds and zones of gray- to

ight-gray-weathering quartzite, quartz-pebble conglomerate, and well-

bedded, feldspathic granofels and coticule, as much as 2 m thick, but

commonly 0.5 to 1 m thick. Interbedded with Ochgs or greenstone

Felsic volcanic member—Cream, light-gray- to bluish-gray-weathering, fine-

grained muscovite-quartz-chlorite-plagioclase schist and gneiss with

distinctive 1- to 3-mm-long plagioclase crystals. Unit is not well layered

and bedding is indistinguishable. Unit is lighter colored than DSwv.

Locally interlayered with garbenschiefer (DSwg) and amphibolite (DSwa)

Amphibolite member—Dark-green, fine-grained, laminated epidote-

carbonate-hornblende-chlorite-plagioclase gneiss (amphibolite) with

laminations 1 to 4 mm thick of carbonate-chlorite and plagioclase.

Discontinuous laminations are parallel to foliation. Contacts with

Mafic gneiss member—Blue-gray to dark-green, coarse-grained, weakly

foliated, massive epidote-chlorite-plagioclase-hornblende gneiss, possibly

ubiquitous, forming possible replacement for relict ophitic texture.

Contacts with surrounding amphibolite (DSwa) are sharp

surrounding units are sharp

green, very fine grained, phyllonitic chlorite-quartz-muscovite schist,

Feldspathic biotite schist and granofels—Light- to medium-dark-gray,

Rusty, carbonaceous, feldspathic schist—Medium-dark-gray-weathering,

slightly rusty weathering muscovite-biotite-quartz-plagioclase schist and

granofels. Contains tiny porphyroblasts of plagioclase and widely

scattered carbonaceous patches. Overall, quite feldspathic and

Cooper Hill Member-Medium- to dark-gray, feldspathic muscovite-

chlorite-biotite-plagioclase-quartz schist; locally, splintery gray-green,

more chloritic quartz schist with or without small, scattered garnets; not

Nicholas M. Ratcliffe and Thomas R. Armstrong

medium-grained biotite-quartz-plagioclase schist or granofels, containing

with minor cross biotite; interpreted as mylonitic variety. Coticule

more muscovite, is more schistose, and is more poorly bedded

as basaltic lava flows and volcaniclastic beds

perhaps due to deformation or facies changes

making up as much as 60 percent of rock

urkey Mountain Member-Dark-green to black calcite-epidote-chlorite-

actinolite-plagioclase greenstone or hornblende±garnet-plagioclase

amphibolite, locally interbedded with surrounding units. Contains thin,

silty to sandy epidote- and magnetite-laminated graywacke. Interpreted

Hoosac Formation, undivided—Heterogeneous unit consisting mainly of

dark-gray- to medium-light-gray-weathering, white-plagioclase-studded

schist and granofels; gray, slabby, quartz-rich muscovite-biotite schist;

and rare layers of dark-gray quartzite. East of Chester dome, unit tends

to be more schistose, less well bedded, and more rusty weathering,

Gray albitic granofels—Light-gray- to medium-gray-weathering biotite-

to 1 cm scale and marked by abundance of white albite porphyroblasts

 F_2 vertical

 F_1 inclined

 \longrightarrow F_1 vertical

----- Middle Proterozoic fold

Inclined

Vertical

Strike and dip of bedding

PLANAR STRUCTURES

[May be combined; joined at point of observation; multiple dip values attached to a

single symbol indicate range of values observed]

Strike and dip of compositional layering or gneissosity of probable

fine-grained, ropy-structured to well foliated biotite-quartz-microcline-

plagioclase granite gneiss. Commonly contains indistinct layers and (or)

augen of microcline and intergrown plagioclase as much as 2 cm in

diameter. Unit resembles Ygp but contains abundant grains of microcline

1 to 2 mm in diameter, subequal in abundance to plagioclase, which

commonly forms larger grains 3 to 5 mm in diameter. Accessory

metamorphic muscovite and coarse epidote common. Finer grained

varieties may contain abundant scattered magnetite. Unit interpreted as

original feldspathic volcanic rock migmitized in Middle Proterozoic. May

correlate with felsic magnetite gneiss (Yfg), as mapped in the Mount

Trondhjemite gneiss—Light-gray- to chalky-white-weathering, medium-

western part of map at eastern edge of Green Mountain massif

grained, biotite-quartz-plagioclase gneiss, containing irregular areas of

Holly area (Ratcliffe, 1992)

or of gneissic layering—Semicircular arrow shows rotation sense of

or quartz rodding or hinge line of fold in mylonitic rocks—Indicates

transport direction. Semicircular arrow shows rotation sense of minor

Bearing and plunge of prominent mullion structure, smear lination,

OTHER SYMBOLS

Quarries—t, talc; sp, soapstone; g, granite; fs, flagstone; s, serpentine

asymmetric minor fold viewed down plunge

Bearing and plunge of lineation of Acadian age

fold axis viewed down dip

_{0.486 ± 3 Ma} Location of sample with age date

Area of outcrop examined in this study

fs X Active

t 🛠 Inactive